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present application. In this regard, Applicants note that box "13" and box "a", therebelow, have been checked on the Form PTO 326. However none of boxes 1 through 3 below box 13 have been checked. Clarification of the status of Applicants claim for foreign priority under 35 U.S.C. § 119 is hereby respectfully requested.

In the Official Action, the Examiner has rejected claims 1, 5, 6, 8-10 and 13-16 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,731,652 to SHIMADA. Applicant respectfully traverses.

With respect to the 35 U.S.C. § 102(b) rejection of independent claims 1 and 10, SHIMADA does not disclose detecting a linear differential value of the step-up ratio as is disclosed in the present invention. More specifically, the present invention uses a gradient of a step-up ratio (boosting ratio) of a piezoelectric transformer which varies as a driving frequency of the piezoelectric transformer changes. The gradient of the step-up ratio varies, for example, with the driving frequency of the piezoelectric transformer as shown in figure 3B. More specifically, the polarity of the gradient of the step-up ratio is detected, a magnitude relation of the driving frequency is determined, and then the driving frequency can thus be controlled. That is, the driving frequency is increased or decreased so that the driving frequency approaches the resonant frequency based on the determined magnitude relation. To the contrary, there appears to be no disclosure whatsoever in SHIMADA that the differential step-up ratio is detected. Rather, as discussed in column 4, lines 25-34 of SHIMADA, a input power detecting circuit 41 and a output power circuit 42 detect the input

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and output power respectively. Furthermore SHIMADA detects the frequency such that the efficiency is maximized by detecting input and output powers as described in column 4, lines 25 through 34. SHIMADA thus drives the transformer with the detected frequency to thus drive the transformer with maximum efficiency. The SHIMADA reference does not disclose using the relationship between step-up ratio and the driving frequency of the piezoelectric transformer. Thus, the disclosed controlling and the controller that both control the frequency according to the sensed linear differential is not taught by SHIMADA. This is because the SHIMADA frequency is controlled by the input and output sensor via, inter alia, a comparator 9, the power detecting circuit 41 and the output power circuit 42, rather than the linear differential value described in the present disclosure.

Absent a disclosure in a single reference of each and every element recited in a claim, a *prima facie* case of anticipation cannot be made under 35 U.S.C. § 102. Since the applied reference fails to disclose each and every element recited in independent claims 1 and 10 and the claims dependent therefrom, these claims are not anticipated thereby. Accordingly, the Examiner is respectfully requested to withdraw the rejection under 35 U.S.C. § 102(b).

With respect to the objection to the specification, Applicants have reviewed the specification as suggested by the Examiner. As such there does appear to be any substantial informalities that need to be corrected and thus the specification is deemed proper. It is thus respectfully requested that the Examiner withdraw the objection to the specification in the present application

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Attached to this response is a Request for Approval of Drawing Amendment. In the Request are copies of Figures 1, 7, 11, 13 and 15 with proposed changes indicated in red ink. In particular, applicant has amended these Figures to correct the label of element 102 to "DC-DC Converter."

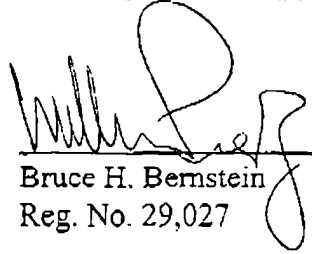
The above noted changes are merely to make these Figures more consistent with the specification. The changes find support, inter alia, at page 21, line 6 of the specification and thus they do not introduce prohibited new matter into the disclosure of the present application. Accordingly, entry and approval for the revised Figures is respectfully requested.

In view of the herein contained remarks, Applicants respectfully request reconsideration and withdrawal of each of the outstanding rejections set forth in the above-mentioned Official Action, together with an indication of the allowability of all of the claims pending in the present application.

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Should the Examiner have any questions or comments regarding the present response,  
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or the present application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,  
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9-8-03

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